

Amendments to the Claims:

Please cancel claims 1 to 7 as presented in the underlying International Application No. PCT/EP2004/014135 without prejudice.

Please add the following new claims as indicated in the listing of claims below.

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1 to 7 (canceled).

Claim 8 (new): A method for automatic generation of an envelope approximating a surface of a design model available on a computer of a technical system, in which a mesh of the design model is prescribed, the mesh including finite elements with nodes, the method comprising the following steps:

- determining a cuboid, the mesh being fully contained in the cuboid,
- decomposing the cuboid into volume elements with edges at most exactly as long as a prescribed bound,
- checking, for each volume element, whether the volume element overlaps with at least one finite element of the mesh,
- determining a body that is formed by the overlapping volume elements,
- determining bounding surfaces bounding the body from the outside, and
- assembling the envelope from the determined bounding surfaces.

Claim 9 (new): The method as recited in claim 8 wherein the cuboid is decomposed such that a shortest edge of each volume element is greater than or equal to a longest edge of each finite element,

the checking step including deciding, whenever at least one node of the finite element lies in the volume element, that the volume element overlaps with the finite element, and deciding, whenever no node of the finite element lies in the volume element, that the volume element does

not overlap with the finite element.

Claim 10 (new): The method as recited in claim 8 wherein the finite elements of the mesh are rectangles and the volume elements are cuboids.

Claim 11 (new): The method as recited in claim 8 further comprising prescribing a wavelength of a harmonic oscillation process, the volume elements being cubes with an edge length being a prescribed fraction of the wavelength, and a finite element simulation of the harmonic oscillation process is carried out by using the envelope.

Claim 12 (new): The method as recited in claim 8 wherein, the volume elements are cuboids, and when determining the bounding surfaces, those volume elements are determined that form cavities in an interior of the determined body, and further comprising filling the cavities, the bounding surfaces of the solid three-dimensional body thereby produced being determined.

Claim 13 (new): A computer program product that can be loaded directly into an internal memory of a computer and comprises software sections with the aid of which a method as recited in claim 8 can be executed when the product is running on a computer.

Claim 14 (new): A computer program product stored on a computer readable medium and including a computer readable program that prompts the computer to execute a method as recited in claim 8.